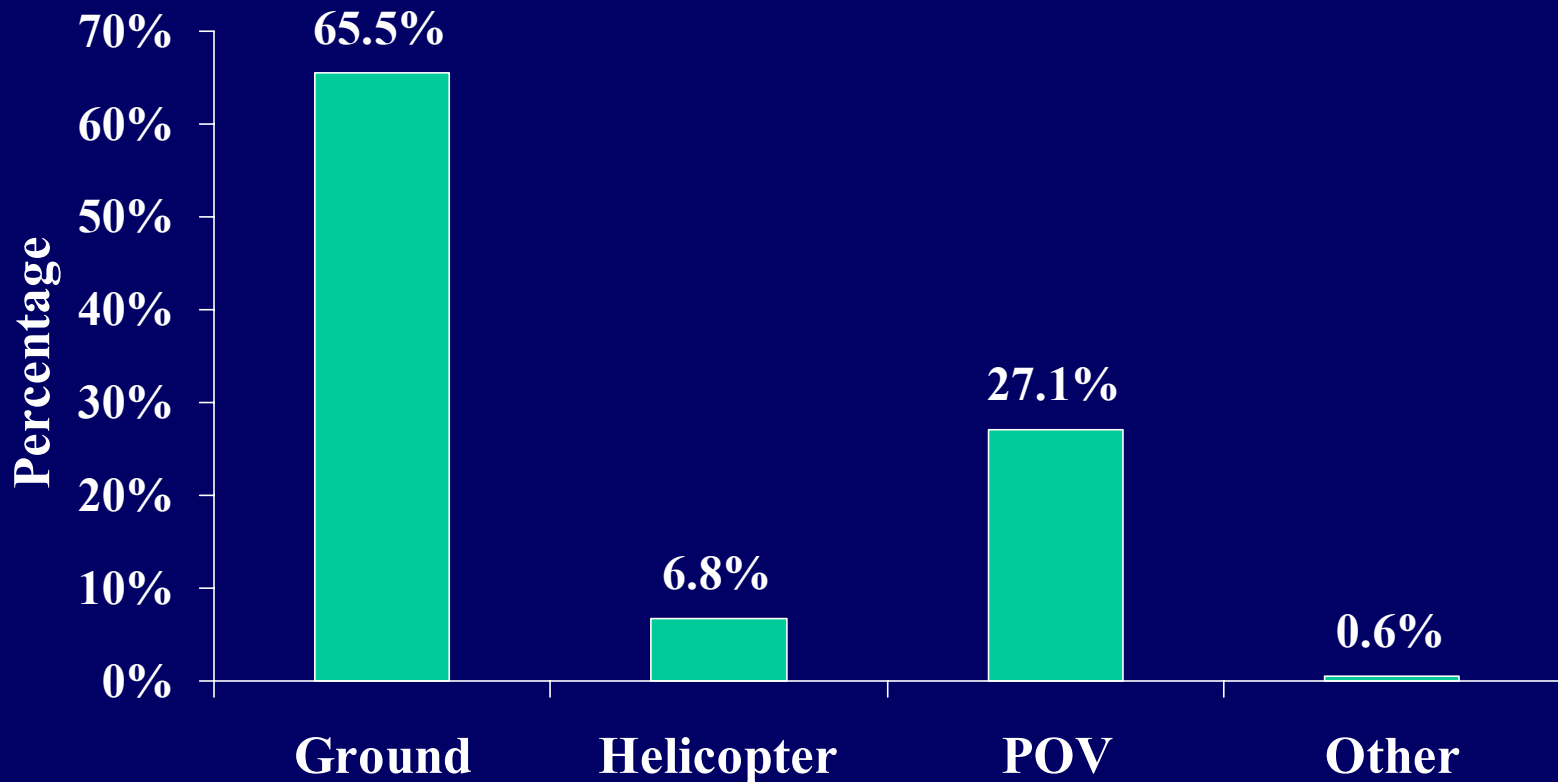


# Patient Flow through the System

EMS and Trauma Steering Committee  
March, 2003

# Transported from Scene

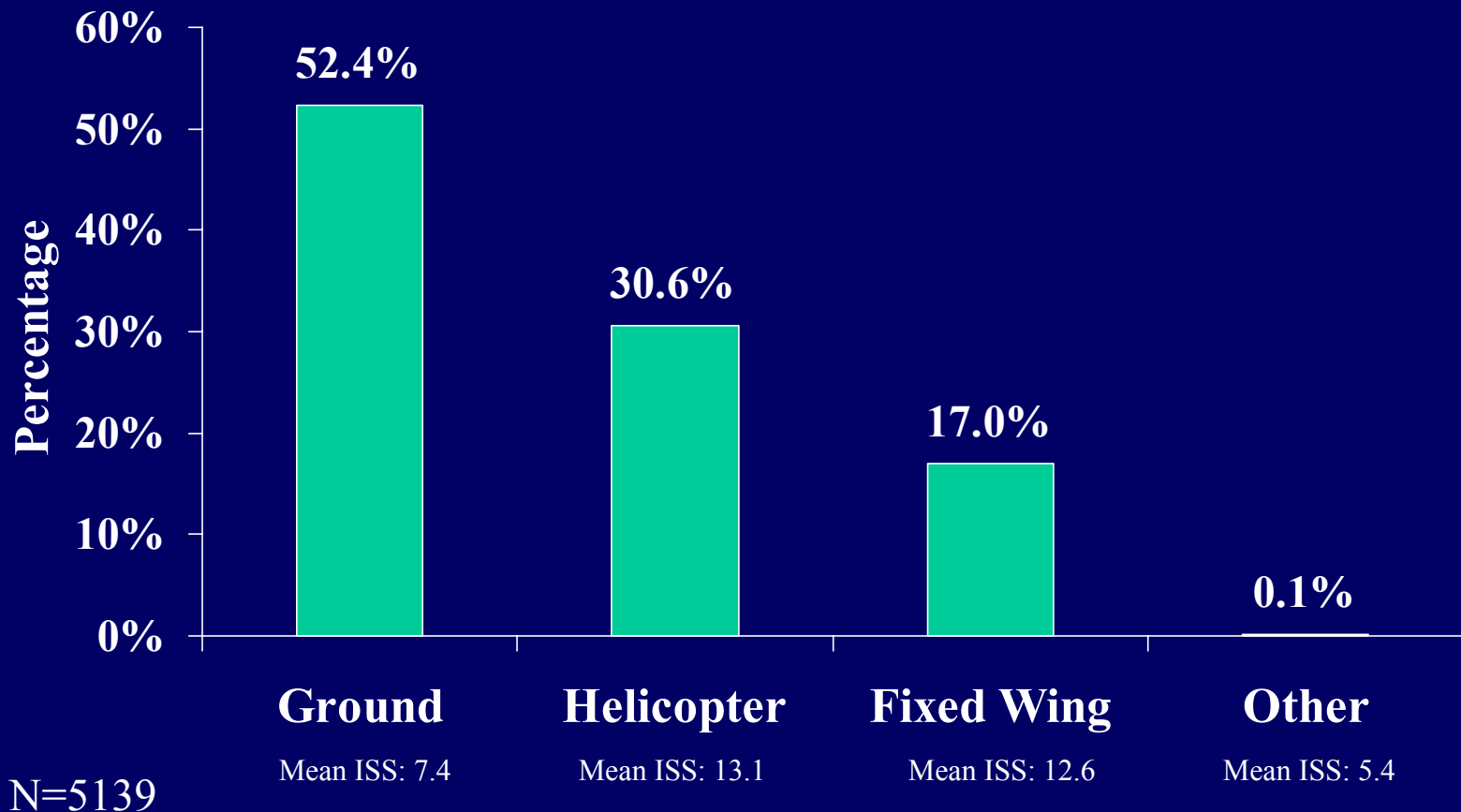
(July 1, 2000 – June 30, 2002, DOH criteria, excluding transfers in)



N=20,852

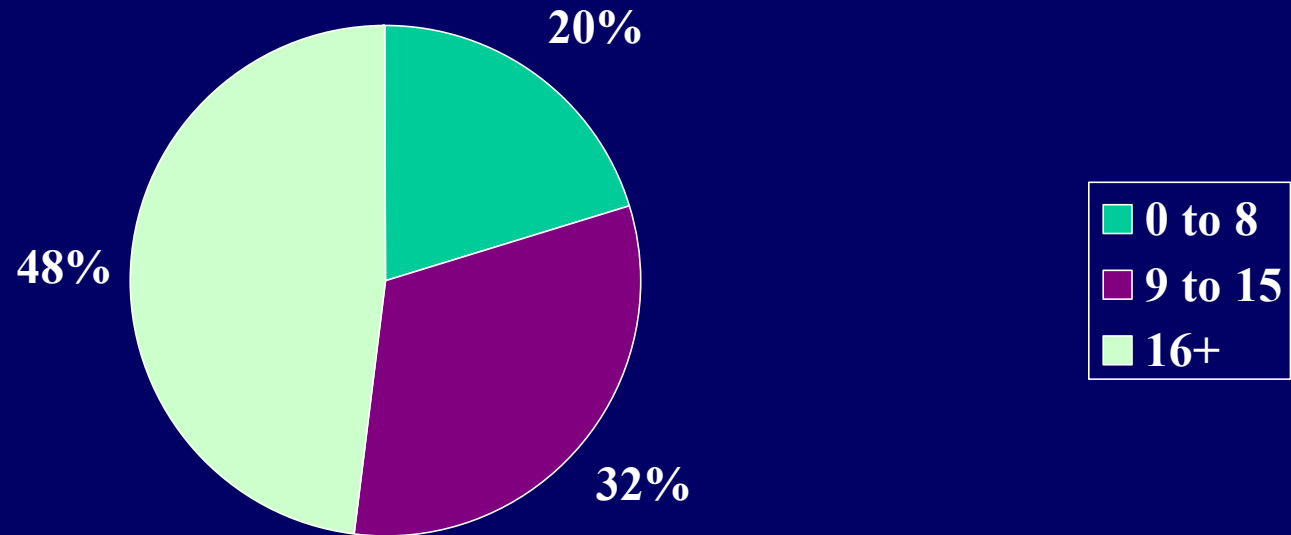
# How Transported from Referring Hospital

(July 1, 2000 – June 30, 2002, DOH criteria, transfers in only)



# Air Transports from Scene: ISS

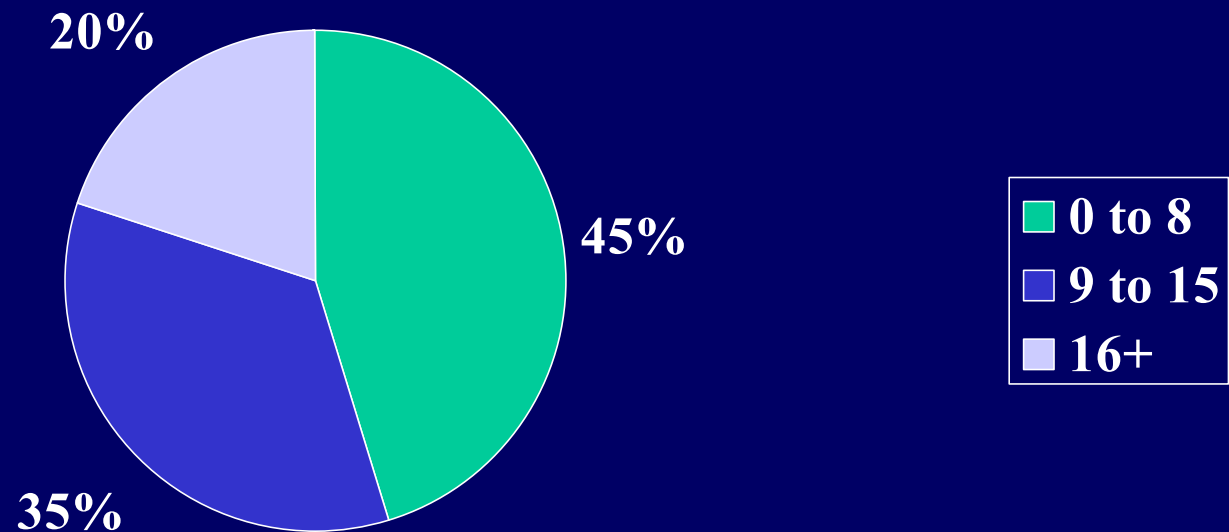
(July 1, 2000 – June 30, 2002, DOH criteria, no transfers)



N=1,412

# Ground Transports from Scene: ISS

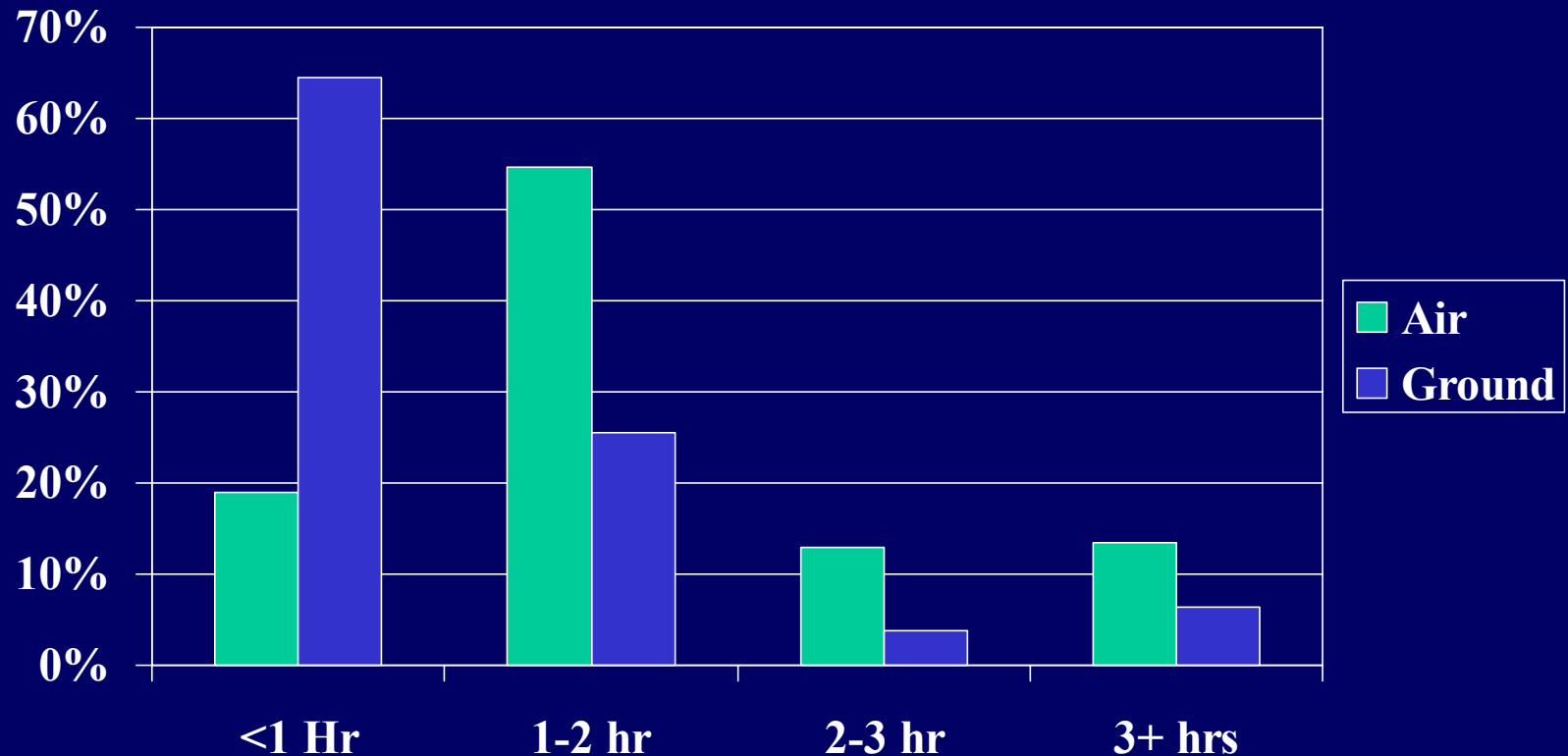
(July 1, 2000 – June 30, 2002, DOH criteria, no transfers)



N=13,650

# Time from Injury to 1<sup>st</sup> Hospital

(July 1, 2000 – June 30, 2002, DOH criteria, no transfers)



Missing data: 46% for ground, 67% for air

# Missing Time from Injury to 1<sup>st</sup> Hospital

- Air: 14.5% died for patients with missing times compared to 11.8% for patients with times (Not significant - Two sample t test with unequal variance,  $p=.15$ )
- Ground: 7.6% died for patients with missing times compared to 5.3% for patients with times (Statistical significant,  $p<.0001$ )

# Air Transport from Scene: Outcomes

(July 1, 2000 – June 30, 2002, DOH criteria, no transfers)

- 192 patients died (13.6%)  
(4 DOA, 50 ED, 16 OR, 122 Floor)
- 434 (30.7%) to OR from ED
- 507 (35.9%) to ICU
- 48 (3.4%) transfer from ED to another ACF
- 36 (2.5%) transferred after admission
- Discharges home from ED will not meet inclusion criteria.



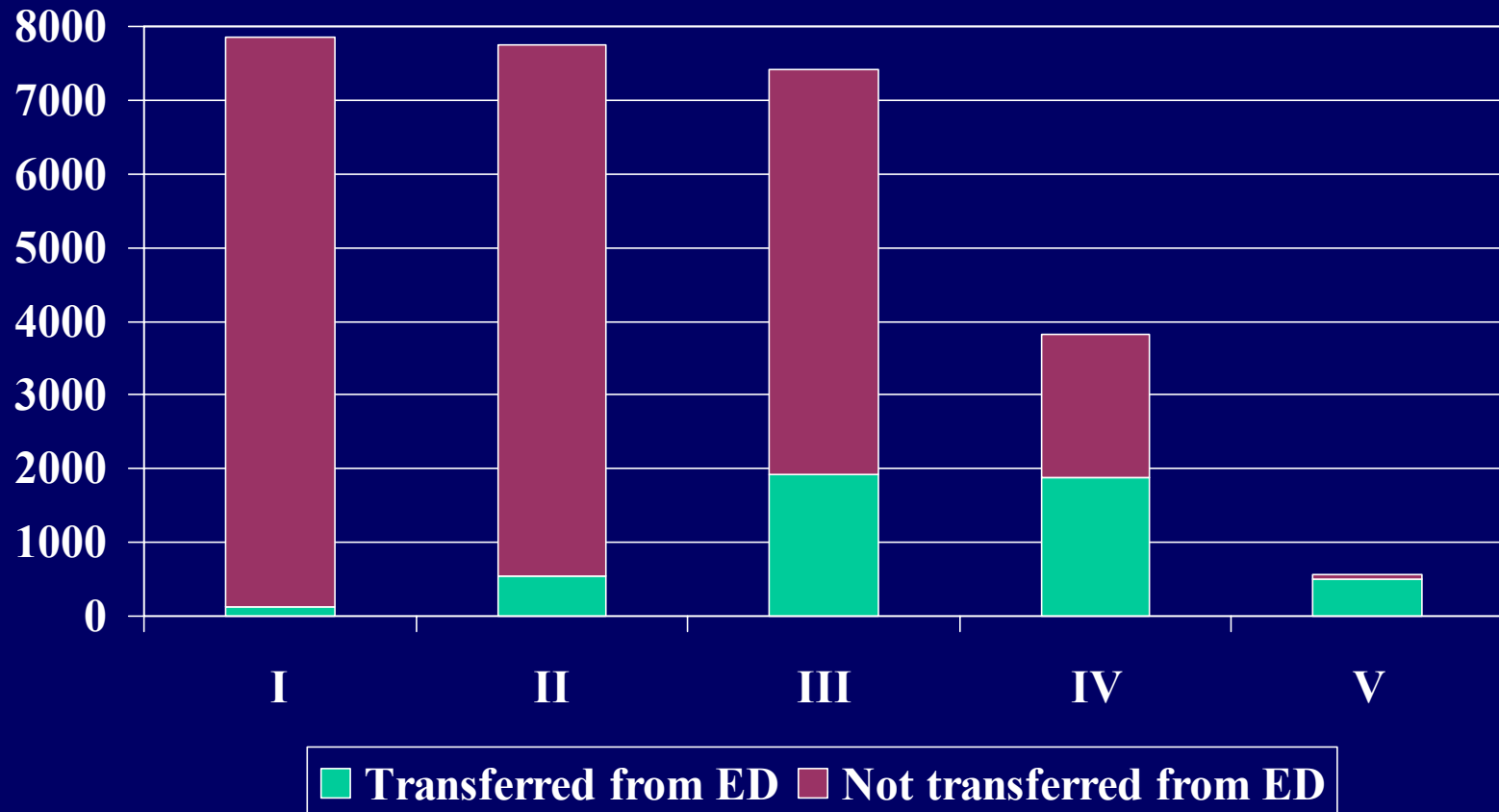
# Ground Transport from Scene: Outcomes

(July 1, 2000 – June 30, 2002, DOH criteria, no transfers)

- N=13640
- 875 patients died (6.4%)
- 3040 (22.3%) transferred from ED to another ACF
- Review of appropriateness of transport mode for long times to first hospital

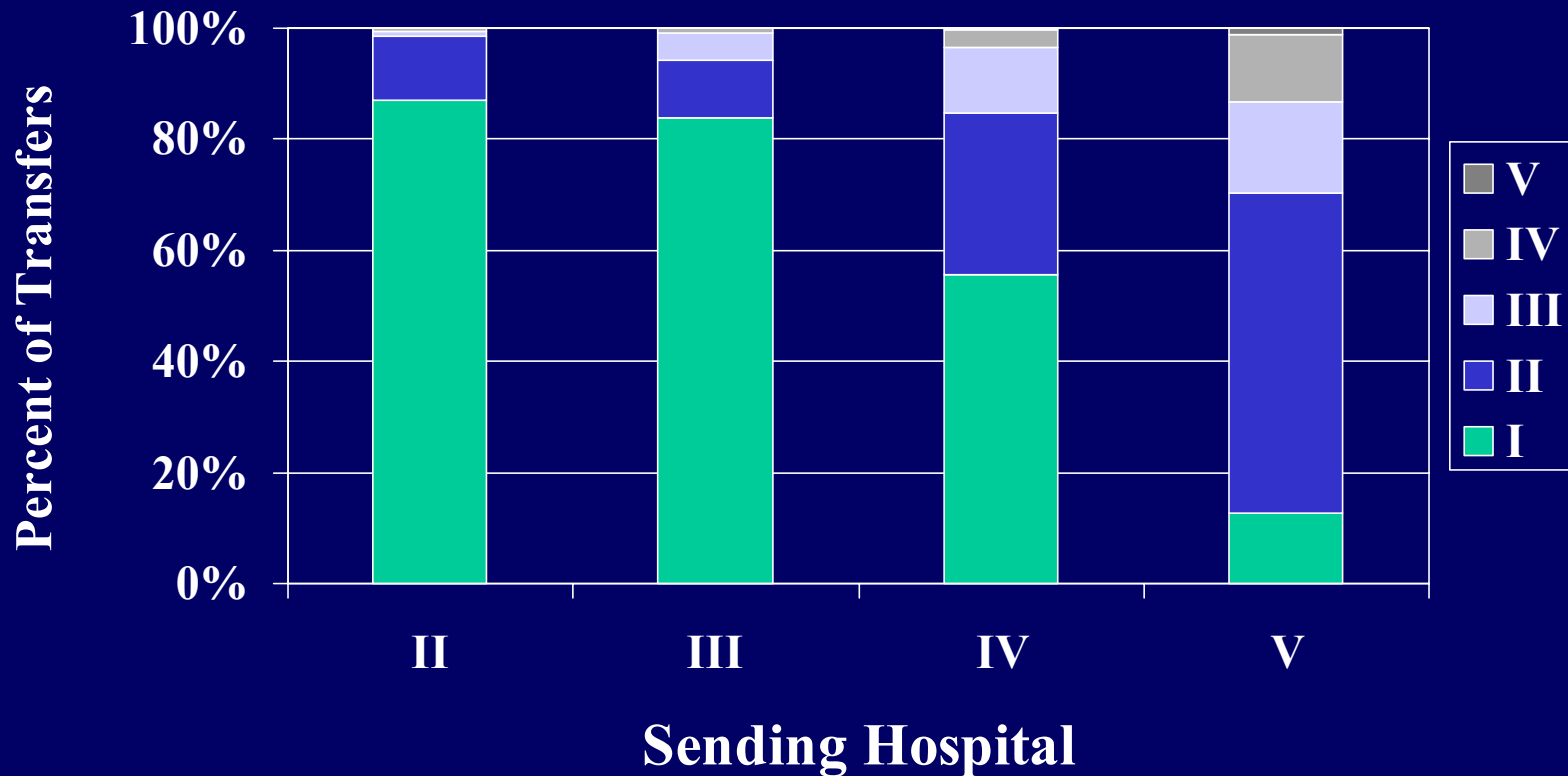
# Hospital Transfers from ED

(July 1, 2000 – June 30, 2002, DOH criteria, ED transfers)



# Transfers from ED to What Level?

(July 1, 2000 – June 30, 2002, DOH criteria, ED transfers)



Note: Level I includes HMC,  
Emanuel & OHSU

# Transfers to lower level

(July 1, 2000 – June 30, 2002, DOH criteria, ED transfers)

- From level II: N=7, Mean ISS 5.3
- From Level III: N=13, Mean ISS 5.2
- From Level IV: N=4, Mean ISS 9.8

# Transfers to Non-Designated Facilities or Unspecified Facilities

(July 1, 2000 – June 30, 2002, DOH criteria, ED transfers)

- From level II: N=35, Mean ISS 7.3
- From Level III: N=152, Mean ISS 6.1
- From Level IV: N=187, Mean ISS 5.7

# The Role of Transfers?

(July 1, 2000 – June 30, 2002, DOH criteria)

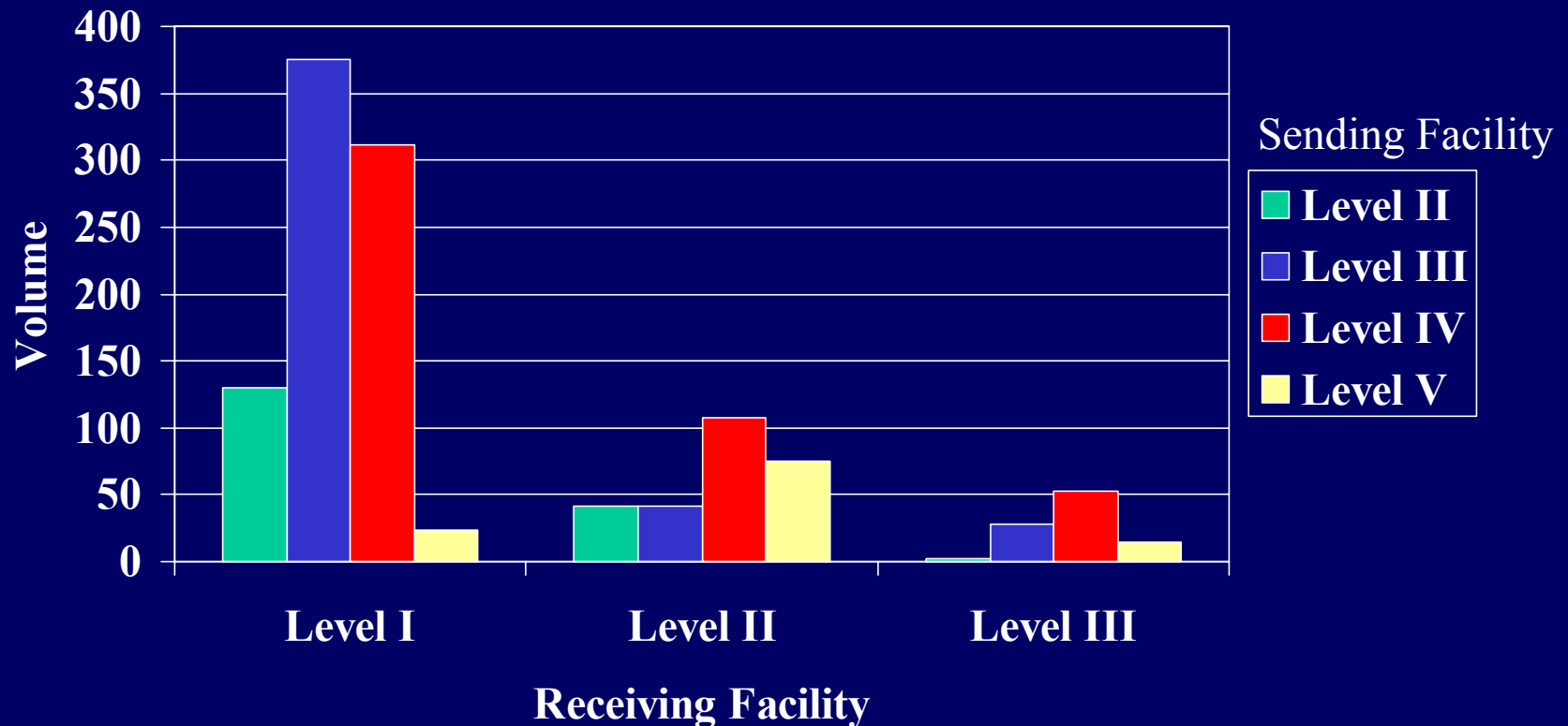
- For major trauma ( $ISS \geq 16$ ): 15% mortality in patients transferred in, compared to 24.4% in direct-from-scene patients.

(Two-sample t test with unequal variance,  $p < .0005$ )

- Moderate trauma ( $ISS\ 9-15$ ): 1.9% vs. 3.9% ( $p < .0005$ )
- Minor trauma ( $ISS < 9$ ): 1.0% vs. 1.6% ( $p = .0157$ )

# ISS<9 Transfers from ED

Year 2001, State Criteria



# Transfers after Admission

(July 1, 2000 – June 30, 2002, DOH criteria)

- 586 patients were admitted and subsequently transferred (27.2% with  $ISS \geq 16$ )
- 38% had surgery prior to transfer.
- 20.6% had ICU stays without surgery.
- 27.8% had traumatic brain injury.
- Why were they transferred?
- How should we evaluate?



# Medicaid and Transfers

(July 1, 2000 – June 30, 2002, DOH criteria)

